

CLAIMS

1. An electrophoretic display apparatus,
comprising:

5 a display portion,
 an electrophoretic dispersion liquid,
contained in the display portion, comprising charged
particles and a dispersion medium for dispersing the
charged particles, and

10 an electrode for driving the electrophoretic
dispersion liquid,

 wherein a surface of charged particle, the
dispersion medium, and a surface of an inner wall on
which the charged particles are to be deposited

15 satisfy any one of the following (A) to (D):

 (A) the charged particle surface is
hydrophilic, the dispersion medium is hydrophobic or
is hydrophobic and lipophobic, and the inner wall
surface is hydrophilic,

20 (B) the charged particle surface is hydrophobic,
the dispersion medium is hydrophilic or is hydrophobic
and lipophobic, and the inner wall surface
is hydrophobic,

 (C) the charged particle surface is hydrophobic
25 and lipophobic, the dispersion medium is hydrophobic
or hydrophilic, and the inner wall surface is
hydrophobic, with the proviso that the dispersion

medium has a lower hydrophobicity than the inner wall surface when the dispersion medium is hydrophobic, and

(D) the charged particle surface is hydrophobic and lipophobic, the dispersion medium is hydrophobic or
5 hydrophilic, and the inner wall surface is hydrophobic and lipophobic.

2. An apparatus according to Claim 1, wherein at least one of the charged particle surface, the
10 dispersion medium, and the inner wall surface is hydrophilic and contains at least one species of a group selected from the group consisting of amino group, amido group, imido group, carboxyl group, carbonyl group, hydroxyl group, and sulfo group.

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3. An apparatus according to Claim 1, wherein at least one of the charged particle surface, the dispersion medium, and the inner wall surface is hydrophobic and contains at least one species of a
20 group selected from the group consisting of a halogen-substituted derivative, silicon atom, alkyl group, phenyl group, benzyl group, and naphthyl group.

4. An apparatus according to Claim 1, wherein at
25 least one of the charged particle surface, the dispersion medium, and the inner wall surface is hydrophobic and lipophobic and contains at least

fluorine atom.

5 5. An apparatus according to Claim 1, wherein the dispersion medium is hydrophobic and an insulating liquid.

10 6. An apparatus according to any one of Claims 1 - 5, wherein the charged particle surface has a fluorine atom-containing compound, the inner wall surface has a silicon atom-containing compound, and the dispersion medium is a solvent containing a paraffin-based hydrocarbon compound.

15 7. An apparatus according to Claim 1, wherein the charged particles and the dispersion medium are accommodated in a plurality of sections partitioned by a partition wall, and the inner wall has a plurality of portions which contain the partition wall surface.

20 8. An apparatus according to any one of Claims 1 - 7, wherein the dispersion medium has a contact angle of 30 degrees with respect to the inner wall surface.